

Curriculum vitae

Nikolaos Kontoudakis

Assistant Professor – International Hellenic University, Agricultural Biotechnology and Enology Department (Drama, Greece)

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Dr. Nikolaos Kontoudakis studied at the Crop Science Department of the Agricultural University of Athens (Greece). Upon completion of his studies, he moved to Spain to obtain his PhD degree from the Faculty of Enology (University Rovira i Virgili). His PhD was focused mainly at the influence of grape phenolic maturity on wine phenolic composition. He obtained the PhD at 2010 and continued forming part of the same research group working on different subjects related with wine technology. In October 2014 he joined the National Wine and Grape Industry Centre of the Charles Sturt University (Wagga Wagga, Australia). He focused mainly on the interaction of the metals with different wine components. In 2019 he moved to Athens and since then works as post-doctoral research fellow at the Laboratory of Enology and Alcoholic Drinks at the Agricultural University of Athens until 2022. His research focused at the study of the typicality of the Greek wines. He was also, teaching Wine Sciences and Technology of Alcoholic Beverages at under graduated and post-graduated students. From June 2022 he is part of the Agricultural Biotechnology and Enology Department of the International Hellenic University (Drama Greece) working as Assistant Professor, teaching winemaking technology. He is co-author of 39 scientific papers and participated to several international and national scientific communications. Lastly, he is editor-in-chief at the journal IVES Technical Reviews.

Education

Higher education

Degree in Agricultural Science

Faculty of Crop Science. Agricultural University of Athens, Athens, Greece (1998-2005).

Specialization in viticulture and arboriculture.

Diploma of Advanced Studies (DEA).

Department of Biochemistry and Biotechnology, Faculty of Enology, Rovira i Virgili University, Tarragona, Spain (2006-2007).

Subject: Impact of stopper type on oxygen ingress during wine bottling when using an inert gas cover.

Master in Mental Health: Research in Psychiatry, Neurotoxicology and Psychopharmacology.

Department of Basic Medical Sciences, Faculty of Medicine and Science of Health, Rovira i Virgili University, Tarragona, Spain (2010-2011).

Doctorate

PhD in Enology (European Mention)

Department of Biochemistry and Biotechnology, Faculty of Enology, Rovira i Virgili University, Tarragona, Spain (2007-2010).

Subject: Grape phenolic maturity; determination methods and consequences on wine phenolic composition. ISBN: 978-84-693-7682-9/DL:T-1754-2010.

Teaching role

Teaching Wine Technology, Wine Chemistry, Technology of Alcoholic Beverages at Bachelor and Master degrees.

Publications and scientific results

Scientific publications in international peer reviewed journals (39 articles)

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2022

- ✓ Dimitrios Evangelos Miliordos, Anastasios Alatzas, Nikolaos Kontoudakis, Angeliki Kouki, Marianne Unlubayir, Marin-Pierre Gémin, Alexandros Tako, Polydefkis Hatzopoulos, Arnaud Lanoue, Yorgos Kotseridis. 2022. **Absciscic Acid and Chitosan Modulate Polyphenol Metabolism and Berry Qualities in the Domestic White-Colored Cultivar Savvatiano.** *Plants*. 11(13), 1648.
<https://doi.org/10.3390/plants11131648>
- ✓ Dimitrios Evangelos Miliordos, Alexandros Kanapitsas, Despina Lola, Elli Goulioti, Nikolaos Kontoudakis, Georgios Leventis, Myrto Tsiknia and Yorgos Kotseridis. 2022. **Effect of Nitrogen Fertilization on Savvatiano (Vitis vinifera L.) Grape and Wine Composition.** *Beverage*. 8(2), 29.
<https://doi.org/10.3390/beverages8020029>
- ✓ Xinyi Zhang, Paul Bowyer, Geoffrey R. Scollary, Andrew C. Clark and Nikolaos Kontoudakis. 2021. **Sulfide-bound copper removal from red and white wine using membrane and depth filters: Impacts of oxygen, H₂S-to-Cu ratios, diatomaceous earth and wine volume.** *Food Chemistry*. In proof.
<https://doi.org/10.1016/j.foodchem.2021.131758>

2021

- ✓ Dimitrios-Evangelos Miliordos, Myrto Tsiknia, Nikolaos Kontoudakis, Maria Dimopoulou, Costas Bouyioukos and Yorgos Kotseridis. 2021. **Impact of Application of Absciscic Acid, Benzothiadiazole and Chitosan on Berry Quality Characteristics and Plant Associated Microbial Communities of Vitis vinifera L var. Mouhtaros Plants.** *Sustainability*. 13(11), 5802.
<https://doi.org/10.3390/su13115802>

- ✓ Xinyi Zhang, Nikolaos Kontoudakis, Eric Wilkes, Neil Scrimgeour, Kieran Hirlam, and Andrew C. Clark. 2021. **The removal of Cu from wine by copolymer PVI/PVP: Impact on Cu fractions and binding agents.** *Food Chemistry*. 357, 129764.
<https://doi.org/10.1016/j.foodchem.2021.129764>

2020

- ✓ Andrew C. Clark, Xinyi Zhang and Nikolaos Kontoudakis. 2020. **Simplified measures of Cu fractions in wine: Colorimetric and filtration-based approaches.** *Australian Journal of Grape and Wine Research*. 26(4), 399–409.
doi: 10.1111/ajgw.12450
- ✓ Xinyi Zhang, Nikolaos Kontoudakis, Katja Sukić, Guillaume Antalick, John W. Blackman, Douglas Neil Rutledge, Leigh M. Schmidtke and Andrew C. Clark. 2020. **Changes in red wine composition during bottle ageing: Impacts of grape variety, vineyard location, maturity and oxygen availability during ageing.** *Journal of Agricultural and Food Chemistry*. 68(47), 13331–13343.
<https://doi.org/10.1021/acs.jafc.9b07164>
- ✓ Nikolaos Kontoudakis, Mark Smith, Paul A. Smith, Eric N. Wilkes and Andrew C. Clark. 2020. **The colorimetric determination of Cu in wine: Total Cu.** *Australian Journal of Grape and Wine Research*. 26, 121–129.
- ✓ Nikolaos Kontoudakis and Andrew C. Clark. 2020. **Sulfide-binding to Cu(II) in wine: Impact on oxygen consumption rates.** *Food Chemistry*. 316, 126352.

2019

- ✓ Xinyi Zhang, Nikolaos Kontoudakis, John W. Blackman and Andrew C. Clark. 2019. **Copper(II) and Sulfur Dioxide in Chardonnay Juice and Shiraz Must: Impact on Volatile Aroma Compounds and Cu Forms in Wine.** *Beverages*. 5(4), 70.
- ✓ Xinyi Zhang, Nikolaos Kontoudakis, John Blackman, Katja Šukić, Guillaume Antalick and Andrew C. Clark. 2019. **Determination of 13 Volatile Aldehyde Compounds in Wine by GC-QQQ-MS: p-Benzoquinone to Dissociate Hydrogen Sulfite Addition Products.** *Food Analytical Methods*. 12 (6), 1285–1297.
- ✓ Xinyi Zhang, Nikolaos Kontoudakis and Andrew C. Clark. 2019. **Rapid Quantitation of 12 Volatile Aldehyde Compounds in Wine by LC-QQQ-MS: A Combined Measure of Free and Hydrogen-Sulfite-Bound Forms.** *Journal of Agricultural and Food Chemistry*. 67 (12), 3502–3510.

- ✓ Nikolaos Kontoudakis, Leigh M. Schmidtke, Marlize Z. Bekker, Mark Smith, Paul A. Smith, Geoffrey R. Scollary, Eric N. Wilkes and Andrew C. Clark. 2019. **Analytical strategies for the measurement of different forms of Cu and Fe in wine: Comparison between approaches in relation to wine composition.** *Food Chemistry*. 274, 89-99.
- ✓ Nikolaos Kontoudakis, Agnieszka Mierczynska-Vasilev, Anque Guo, Paul A. Smith, Geoffrey R. Scollary, Eric N. Wilkes and Andrew C. Clark. 2019. **Removal of sulfide-bound copper from white wine by membrane filtration.** *Australian Journal of Grape and Wine Research*. 25 (1), 53-61.

2018

- ✓ Eirini Athanasiadou, Maria Paschalidou, Anna Theocharidou, Nikolaos Kontoudakis, Konstantinos Arapostathis and Athina Bakopoulou. 2018. **Biological interactions of a calcium silicate based cement (Biodentine™) with Stem Cells from Human Exfoliated Deciduous teeth.** *Dental Materials*. 34 (12), 1797-1813.
- ✓ Andrew C. Clark and Nikolaos Kontoudakis. 2018. **Increasing the efficiency and accuracy of labile Cu measurement in wine with screen-printed electrodes.** *Chemosensors*. 6 (3), 35.
- ✓ María Navarro, Nikolaos Kontoudakis, Sergio Gómez-Alonso, Esteban García-Romero, Joan Miquel Canals, Isidro Hermosín-Gutiérrez and Fernando F. Zamora. 2018. **Influence of the volatile substances released by oak barrels into a Cabernet Sauvignon red wine and a discolored Macabeo white wine on sensory appreciation by a trained panel.** *European Food Research and Technology*. 244 (2), 245-258.

2017

- ✓ Anque Guo, Nikolaos Kontoudakis, Geoffrey R. Scollary and Andrew C. Clark. 2017. **Production and isomeric distribution of xanthylum cation pigments and their precursors in wine-like conditions: Impact of Cu (II), Fe (II), Fe (III), Mn (II), Zn (II) and Al (III).** *Journal of Agricultural and Food Chemistry*. 65 (11), 2414-2425.
- ✓ María Navarro, Nikolaos Kontoudakis, Joan Miquel Canals, Esteban García-Romero, Sergio Gómez-Alonso, Fernando F. Zamora and Isidro Hermosín-Gutiérrez. 2017. **Improved method for the extraction and chromatographic analysis on a fused-core column of ellagitannins found in oak-aged wine.** *Food Chemistry*. 226, 23-31.

- ✓ Nikolaos Kontoudakis, Anque Guo, Geoffrey R. Scollary, Andrew C. Clark. 2017. **The impact of aging wine in high and low oxygen conditions on the fractionation of Cu and Fe in Chardonnay wine.** *Food Chemistry*. 229, 319–328.
- ✓ Nikolaos Kontoudakis, Mark Smith, Anque Guo, Paul A. Smith, Geoffrey R. Scollary, Eric N. Wilkes and Andrew C. Clark. 2017. **The impact of wine components on fractionation of Cu and Fe in model wine systems: macromolecules, phenolic and sulfur compounds.** *Food Research International*. 98, 95–102.
- ✓ Elena González-Royo, Mireia Esteruelas, Nikolaos Kontoudakis, Fransesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2017. **The effect of supplementation with three commercial inactive dry yeasts on the colour, phenolic compounds, polysaccharides and astringency of a model wine solution and red wine.** *Journal of the Science of Food and Agriculture*. 97 (1), 172–181.

2016

- ✓ Olga Pascual, Jeanette Ortiz, Maruxa Roel, Nikolaos Kontoudakis, Mariona Gil, Sergio Gómez-Alonso, Esteban García-Romero, Joan Miquel Canals, Isidro Hermosín-Gutiérrez and Fernando F. Zamora. 2016. **Influence of grape maturity and prefermentative cluster treatment of the Grenache cultivar on wine composition and quality.** *OENO One*. 50 (4), 169–181.
- ✓ María Navarro, Nikolaos Kontoudakis, Sergio Gómez-Alonso, Esteban García-Romero, Joan Miquel Canals, Isidro Hermosín-Gutiérrez and Fernando F. Zamora. 2016. **Influence of the botanical origin and toasting level on the ellagitannin content of wines aged in new and used oak barrels.** *Food Research International*. 87, 197–203.
- ✓ Michaela Rousseva, Nikolaos Kontoudakis, Leigh M. Schmidtke, Geoffrey R. Scollary and Andrew C. Clark. 2016. **Impact of wine production on the fractionation of copper and iron in Chardonnay wine: Implications for oxygen consumption.** *Food Chemistry*. 203, 440–447.
- ✓ Andrew C. Clark, Nikolaos Kontoudakis, Celia Barril, Leigh M. Schmidtke and Geoffrey R. Scollary. 2016. **Measurement of labile copper in wine by medium exchange stripping potentiometry utilising screen printed carbon electrodes.** *Talanta*. 154, 431–437.
- ✓ María Navarro, Nikolaos Kontoudakis, Thomas Giordanengo, Sergio Gómez-Alonso, Esteban García-Romero, Francesca Fort, Joan Miquel Canals, Isidro Hermosín-Gutiérrez and Fernando F. Zamora. 2016. **Oxygen consumption by oak chips in a model wine solution; Influence of the botanical origin, toast level and ellagitannin content.** *Food chemistry*. 199, 822–827.

2015

- ✓ Mireia Esteruelas, Elena González-Royo, Nikolaos Kontoudakis, Antonio Orte, Antoni Cantos, Joan Miquel Canals, and Fernando F. Zamora. 2015. **Influence of Grape Maturity on the Foaming Properties of Base Wines and Sparkling Wines (Cava)**. *Journal of the Science of Food and Agriculture*. 95 (10), 2071-2080.
- ✓ Elena Gonzalez-Royo, Olga Pascual, Nikolaos Kontoudakis, Mireia Esteruelas, Braulio Esteve-Zarzoso, Albert Mas, Joan Miquel Canals, and Fernando F. Zamora. 2015. **Oenological Consequences of Sequential Inoculation with Non-Saccharomyces Yeasts (*Torulaspora delbrueckii* or *Metschnikowia pulcherrima*) and *Saccharomyces cerevisiae* in Base Wine for Sparkling Wine Production**. *European Food Research and Technology*. 240 (5), 999-1012.

2013

- ✓ Mariona Gil, Mireia Esteruelas, Elena González, Nikolaos Kontoudakis, Josep Jiménez, Fransesca Fort, Joan Miquel Canals, Isidro Hermosín-Gutiérrez and Fernando F. Zamora. 2013. **Effect of two different treatments for reducing grape yield in *Vitis vinifera* cv Syrah on wine composition and quality: berry thinning versus cluster thinning**. *Journal of Agricultural and Food Chemistry*, 61 (20), 4968-4978.
- ✓ Mariona Gil, Sandra Estévez, Nikolaos Kontoudakis, Fransesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2013. **Influence of partial dealcoholization by reverse osmosis on red wine composition and sensory characteristics**. *European Food Research and Technology*. 237 (4), 481-488.
- ✓ Elena González-Royo, Andoni Urtasun, Mariona Gil, Nikolaos Kontoudakis, Mireia Esteruelas, Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2013. **Effect of yeast strain and supplementation with inactive yeast during alcoholic fermentation on wine polysaccharides**. *American Journal of Enology and Viticulture*, 64 (2), 268-273.

2012

- ✓ Mariona Gil, Nikolaos Kontoudakis, Elena González, Mireia Esteruelas, Fransesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2012. **Influence of grape maturity and maceration length on color, polyphenolic composition and polysaccharide content of cabernet sauvignon and tempranillo wines**. *Journal of Agricultural and Food Chemistry*, 60 (32), 7988-8001.

2011

- ✓ Nikolaos Kontoudakis, Mireia Esteruelas, Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2011. **Use of unripe grapes harvested during cluster**

thinning as a method for reducing alcohol content and pH of wine. *Australian Journal of Grape and Wine Research*, 17 (2), 230-238.

- ✓ Nikolaos Kontoudakis, Elena González, Mariona Gil, Mireia Esteruelas, Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2011. **Influence of wine pH in the changes of color and polyphenol composition induced by micro-oxygenation.** *Journal of Agricultural and Food Chemistry*, 59 (5), 1974-1984.
- ✓ Mireia Esteruelas, Nikolaos Kontoudakis, Mariona Gil, Maria Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2011. **Phenolic compounds presents in natural haze protein of sauvignon white wine.** *Food Research International*, 44 (1), 77-83.
- ✓ Nikolaos Kontoudakis, Mireia Esteruelas, Francesca Fort, Joan Miquel Canals, Victor de Freitas and Fernando F. Zamora. 2011. **Influence of the heterogeneity of grape phenolic maturity on wine composition and quality.** *Food Chemistry*, 124 (3), 767-774.

2010

- ✓ Nikolaos Kontoudakis, Mireia Esteruelas, Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2010. **Comparison of methods for estimating phenolic maturity in grapes: Correlation between predicted and obtained parameters.** *Analytica Chimica Acta*, 660 (1-2), 127-133.

2008

- ✓ Nikolaos Kontoudakis, Pere Biosca, Roser Canals, Franesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2008. **Impact of stopper type on oxygen ingress during wine bottling when using an inert gas cover.** *Australian Journal of Grape and Wine Research*, 14 (2), 116-122.

Scientific publications in technical journals

2021

- ✓ Xinyi Zhang, Nikolaos Kontoudakis, and Geoffrey R. Scollary and Andrew Clark. 2021. **Simplified method for the rapid quantification of copper fractions in wine.** *IVES Technical Reviews*, <https://doi.org/10.20870/IVES-TR.2021.4698>
- ✓ Maria Navarro, Nikolaos Kontoudakis, Xinyi Zhang and Geoff Scollary. 2021. **An efficient method for the rapid assessment of free copper in white wine.** *Wine & Viticulture Journal*, 36 (1), 34-38. ISSN: 1838-6547.

2016

- ✓ Maria Navarro, Nikolaos Kontoudakis, Thomas Giordanengo, Sergio Gomez-Alonso, Esteban Garcia-Romero, Fransnsca Fort, Joan Miquel Canals, Isidro Hermosin-Gutierrez and Fernando F. Zamora. 2016. **Wine maturation: Influence of the botanical origin, toast level and ellagitannin content on the oxygen consumption by oak chips in a model wine solution.** *Wine & Viticulture Journal*, 31 (4), 39-42. ISSN: 1838-6547.
- ✓ Mariona Gil, Nikolaos Kontoudakis, Joan Miquel Canals and Fernando F. Zamora. 2016. **Estrategias no microbiológicas para reducir el grado alcohólico de los vinos.** *La Semana vitivinícola*, 3467, 390-398. ISSN: ISSN 0037-184X.

2014

- ✓ Mariona Gil, Nikolaos Kontoudakis, Jot Camps, Fransesca Fort, Joan-Miquel Canals and Fernando F. Zamora. 2014. **Determinación de azúcares residuales en vinos mediante el empleo de un biosensor amperométrico. Comparación con los métodos más usuales: método de Fehling y método enzimático.** *Enologos /Investigación y Ciencia*, 90, 44-53.

2013

- ✓ Elena González-Royo, Andoni Urtasun, Mariona Gil, Nikolaos Kontoudakis, Mireia Esteruelas, Fransesca Fort, Joan-Miquel Canals and Fernando F. Zamora. 2013. **Efecto de la cepa de levadura y la suplementación con levaduras inactivas durante la fermentación alcohólica sobre la concentración en polisacáridos del vino tinto.** *Enoviticultura*, nº 24, 14-21. <http://quatrecbn.es/efecto-de-la-cepa-de-levadura-y-la-suplementacion-con-levaduras-inactivas-durante-la-fermentacion-alcoholica-sobre-la-concentracion-en-polisacaridos-del-vino-tinto/>. ISSN: 2013-6099.
- ✓ Elena González-Royo, Andoni Urtasun, Mariona Gil, Nikolaos Kontoudakis, Mireia Esteruelas, Fransesca Fort, Joan-Miquel Canals and Fernando F. Zamora. 2013. **Effetto del ceppo e dell'aggiunta di derivati di lievito sui polisaccaridi di un vino rosso.** *L'Enologo*, 49, 65-69.

2012

- ✓ Nikolaos Kontoudakis, Elena González, Mariona Gil, Mireia Esteruelas, Fransesca Fort, Joan-Miquel Canals and Fernando F. Zamora. 2012. **The pH influence on micro-oxygenation.** *Australian & New Zealand Grapegrower & Winemaker*, 578, 54-58. <http://www.winebiz.com.au/gwm/view/?action=view&id=852>. ISSN 0727-3606.

2009

- ✓ Nikolaos Kontoudakis, Roser Canals, Mireia Esteruelas, Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2009. **Maceració prefermentativa en fred; Aspectes tecnològics en l'elaboració de vins de criança.** *ACE Revista*

d'Enologia, 87, 10-17. http://www.acenologia.com/ciencia72_2.htm. ISSN-e: 1697-4123/
P-ISSN 0212-842X.

- ✓ Nikolaos Kontoudakis. 2009. **Maturità fenolica delle uve e l'astringenza del vino**. *www.qualitywine.it-Vino e Tecnica*, 1, 20-21.
<http://www.qualitywine.it/scarica.aspx?id=108>

2008

- ✓ Nikolaos Kontoudakis, Roser Canals, Carmen Llaudy, Francesca Fort, Joan Miquel Canals and Fernando F. Zamora. 2008. **Influencia de la madurez fenólica de las uvas sobre la astringencia del vino**. *www.infowine.com-Internet Journal of Enology and Viticulture*, N° 7/2.
<http://www.infowine.com/default.asp?scheda=7137>